CLAIMS

1. An optical deflector comprising:

a photonic crystal section;

a light lead-in means for leading in light to said photonic crystal section; and

an external force application means for deforming said photonic crystal section by way of mechanical external force and changing the angle of refraction of the light led in by said light lead-in section in said photonic crystal section.

2. The optical deflector according to claim 1, wherein

said photonic crystal section is formed by a member deformable by external force and said external force application means is adapted to apply mechanical external force to said photonic crystal section in the direction of cyclicity of the cyclic structure of the photonic crystal section so as to shift the angle of refraction in said photonic crystal section.

3. The optical deflector according to claim 1, wherein

said external force application means is adapted to apply mechanical external force to said photonic crystal section in a direction perpendicular

to the direction of cyclicity of the cyclic structure of the photonic crystal section so as to shift the angle of refraction in said photonic crystal section.

4. The optical deflector according to claim 3, wherein

said photonic crystal section is formed by using deformable pillar-shaped independent members for forming said cyclic structure and a pair of support members arranged to sandwich the independent members in a direction perpendicular to the direction of arrangement of the independent members.

5. The optical deflector according to claim 4, wherein

said support members are formed by substrates and reflection layers arranged on the surfaces of the substrates facing said independent members.

6. The optical deflector according to claim 1, wherein

the end facet of said photonic crystal section through which light goes out is made to show an arc-shaped profile.

7. An optical switch comprising an optical deflector according to claim 1 and a light lead-out

means for leading out light deflected to a desired direction by said optical deflector.

8. An optical scanner comprising an optical deflector according to claim 1.

9. An optical deflection method characterized by leading in light having a specific wavelength to a photonic crystal section, shifting the angle of refraction of the led in light in said photonic crystal section by applying mechanical external force to said photonic crystal section, thereby deflecting the led in light.